



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/691,273	10/18/2000	Robert Anthony Marin	TK-3410-US-NA	4960

23906 7590 08/30/2002

E I DU PONT DE NEMOURS AND COMPANY
LEGAL PATENT RECORDS CENTER
BARLEY MILL PLAZA 25/1128
4417 LANCASTER PIKE
WILMINGTON, DE 19805

EXAMINER

SALVATORE, LYNDIA

ART UNIT	PAPER NUMBER
----------	--------------

1771

6

DATE MAILED: 08/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

mk-6

Office Action Summary

Application No.

09/691,273

Applicant(s)

MARIN ET AL.

Examiner

Lynda M Salvatore

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☒ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 and 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 1771

DETAILED ACTION***Claim Rejections - 35 USC § 112***

1. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Independent claims 1,5 and 6 recite physical properties of a polyethylene plexi-filamentary strand and non-woven made therefrom (i.e., surface area, crush value, Frazier Permeability, hydrostatic head and Gurley Hill Porosity). Ex parte Slob, 157 USPQ 172, states the following with regard to an article claimed by defining property values:

Claims merely setting forth physical characteristics desired in article, and not setting forth specific compositions which would meet such characteristics, are invalid as vague, indefinite, and functional since they cover any conceivable combination of ingredients either presently existing or which might be discovered in future and which would impart desired characteristics, thus, expression "a liquefiable substance having a liquefaction temperature from 40°C. to about 300°C. and being compatible with the ingredients in the powdered detergent composition" is too broad and indefinite since it purports to cover everything which will perform the desired functions regardless of its composition, and in effect, recites compositions by what it is desired that they do rather than what they are; expression also is too broad since it appears to read upon materials that could not possibly be used to accomplish purposes intended.

Thus, claims 1-18 are indefinite for reciting only the desired physical properties of the plexi-filamentary fibers and the non-woven thereof, rather than setting forth structural and/or chemical limitations of said plexi-filamentary articles. Claims 19, and 21-27 are further rejected for their dependency on claims 5 and 7.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 1771

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 5, 26, and 27 are rejected under 35 U.S.C. 102 (b) as being anticipated by Lim et al., US 5,290,628.

The patent issued to Lim et al., teaches a method for making spun-laced non-woven fabrics from flash spun webs of plexi-filaments. The spun-laced non-woven fabrics are particularly useful in filtration applications (e.g., vacuum cleaner bags), and if thermally bonded as garments, pillows and comforters (Abstract). The flash spun polyethylene or polypropylene web used to form the spun-laced non-woven fabrics generally have basis weights ranging from 1.0 to 3.5 oz/yd² (Column 3, lines 40-45). Lim et al., teaches that the porosity of the spun-laced non-woven may be tailored according to the desired end use, but does disclose a Frazier porosity of at least 4ft³/ft²/min (more preferably in the 10-40 ft³/ft²/min range) (Column 4, lines 56-60 and Column 5, lines 9-13).

4. Claim 6 is rejected under 35 U.S.C. 102(e) as being anticipated by Lim et al., US 6,034,008.

Art Unit: 1771

The patent issued to Lim et al., teaches a unitary non-woven sheet comprising flash-spun plexi-filamentary fibers of high-density polyethylene (Column 2, lines 30-36). Various physical properties such as hydrostatic head and Gurley Hill Porosity are shown in tables 4, 5, and 6. Lim et al., discloses in example 27 a hydrostatic head of 117 and Gurley Hill Porosity of 5 seconds in example 30.

5. Claims 20,25, and 26 are rejected under 35 U.S.C. 102 (b) as being anticipated by Steuber, US 3,169,899.

The patent issued to Steuber discloses fibrous non-woven sheets consisting of plexi-filament material (Column 2, lines 14-18). The plexi-filamentary strands are produced from polyhydrocarbons such as polyethylene or polypropylene and have a surface greater than $2\text{m}^2/\text{g}$ (Column 3 lines 70-75, Column 4, lines 6-11 and Column 7, lines 15-16). Steuber teaches that the non-woven sheet may consist of a plurality of discrete plexi-filaments or a single continuous plexi-filament strand arranged in a suitably uniform pattern (Column 6, lines 18-25). Steuber further teaches that the loose batt product is cohered in a circulating hot air oven (Column 7, lines 21-25).

With respect to claims 25 and 26, the recitation of a filter media and a vacuum bag comprising the non-woven of claim 20 is not given patentable weight at this time since the prior art of record meets the structural and chemical limitations. As such, the non-woven of claim 20 could function in the capacity as claimed by the Applicant since there are no other structural or chemical limitations set forth that prove otherwise.

Claim Rejections - 35 USC § 102/103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1771

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-19 are rejected under 35 U.S.C. 102 (b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over or Steuber, US 3,169,899.

Note: The teachings of Steuber have been previously discussed (Section 5 above).

8. Alternatively, claims 1-19 are rejected under 35 U.S.C. 102 (b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Blades US 3,081,519.

The patent issued to Blades discloses a novel process for producing plexi-filaments (Column 2, lines 1-5 and lines 48-55). Blades further discloses that the plexi-filament strands have a surface area greater than $2\text{m}^2/\text{g}$ (Column 5, lines 14-15). Blades teaches that the strands may be knit or woven into fabrics of high strength or they may be beaten or chopped to produce fibrils (Column 7, lines 17-22). The continuous plexi-filament strands of the invention are suitable for processing on standard textile equipment and can be drawn from 2x to 13x to achieve high tenacities (Column 7, lines 43-50). The polymers used to produce the plexi-filament strands are preferably crystalline polyhydrocarbons (e.g., polyethylene, polypropylene) (Column 7, lines 46-48 and 63-70).

Although, Blades and Steuber lack an explicit teaching with regard to the crush value limitations set forth in claims 1 and 4, and a non-woven having the desired combination of Frazier Permeability, hydrostatic head, and Gurley Hill Porosity values as recited in claims 5-19, it is reasonable to presume that said property values are inherent to the inventions of Blades and Steuber. Support for said presumption is found in the use of like materials (i.e., polyhydrocarbons) and the use of like processes (i.e., spinning synthetic polymers for the production of plexi-filaments), which would result in the

Art Unit: 1771

claimed property. The burden of proof is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 495

In addition, the presently claimed Frazier Permeability, hydrostatic head, Gurley Hill Porosity, and crush values would obviously have been present once the Steuber and Blades product is provided. *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977)

9. Claims 5-19 and 21-23 are rejected under 102 (e) as being anticipated by Bisbis et al., US 5,919,539 or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bisbis et al.

The patent issued to Bisbis teaches a method for ultrasonically joining flash-spun bonded polyolefin sheets having a hydrostatic head value of 130 cm (Abstract and Examples 1-4). Bisbis teaches bonding TYVEK® Style 1422A panels/sheets, which are made from flash-spun polyethylene plexi-filamentary fibers that have been thermally bonded (Examples 1-4).

With regard to the limitations set forth in claims 21-23, Bisbis also describes the TYVEK® Style 1422A as having a linen texture on one side and a ribbed texture on the opposite side. Therefore, the limitations set forth in claims 21 and 22 would inherently be met by the TYVEK® Style 1422A panel (Examples 1-4).

Although, Bisbis fails to disclose a non-woven having the desired combination of Frazier Permeability, hydrostatic head, and Gurley Hill Porosity values it is reasonable to presume that said property values are inherent to the invention of Bisbis. Support for said presumption is found in the use of like materials (i.e., polyethylene) and the use of like processes (flash-spun plexi-filamentary filaments), which would result in the claimed

Art Unit: 1771

property. The burden is upon the Applicant to prove otherwise *In re Fitzgerald* 205 USPQ 495

In addition, the presently claimed property values of Frazier Permeability, hydrostatic head, and Gurley Hill Porosity would obviously have been present once the Bisbis product is provided. *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977).

10. Claims 6-19 and 24-27, are rejected under 102 (b) as being anticipated by Lim et al., US 5,290,628 or in the alternative, under 35 U.S.C. 103(a) as obvious over Lim et al., as applied to claim 5 above.

Lim et al., discloses a Frazier porosity value of at least $4\text{ft}^3/\text{ft}^2/\text{min}$ (preferably in the $10\text{-}40\text{ ft}^3/\text{ft}^2/\text{min}$ range) as recited in claims 13-19 (Column 4, lines 56-60 and Column 5, lines 9-13). Additionally, the spun-laced non-woven fabrics are particularly useful in filtration applications (e.g., vacuum cleaner bags), and if thermally bonded as garments, pillows and comforters (Abstract).

Although, Lim et al., fails to disclose a non-woven having the desired combination of Frazier Permeability, hydrostatic head, and Gurley Hill Porosity values it is reasonable to presume that said property values are inherent to the invention of Lim et al. Support for said presumption is found in the use of like materials (i.e., polyethylene) and the use of like processes (flash-spun plexi-filamentary filaments), which would result in the claimed property. The burden is upon the Applicant to prove otherwise *In re Fitzgerald* 205 USPQ 495

In addition, the presently claimed property values of Frazier Permeability, hydrostatic head, and Gurley Hill Porosity would obviously have been present once the

Art Unit: 1771


Lim et al., and Bisbis products are provided. *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977)


Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynda M Salvatore whose telephone number is 703-305-4070. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

ls 
August 26, 2002


CHERYL A. JASKA
PRIM. EXAMINER